

Lawrence Berkeley National Laboratory Lessons Learned

LL-2003-04

Concern Statement: Design Differences in a Step Stool Can Become a Hidden Hazard

Applicable to: Work areas where reaching for items stored overhead necessitates the use of a step stool.

Incident

An employee had to retrieve a book from a shelf located above the desk and used an available step stool to help reach this item. In the process of stepping down from the step stool, she missed the bottom step and her foot landed abruptly on the floor (13 inches below) creating pain to the back of the right knee. The unit was a "Tenex 2 Step Stool" purchased from the Boise Cascade catalog.

Cause

As shown in the photos below, the base step is very narrow, measuring only 4" deep and half of this tread is physically obstructed by the overlapping top step. Because of the narrow design, it is difficult for the user to locate and plant the descending lead foot firmly onto the lower step. This resulted in her missing the lower step and forced the lead leg





to support the body's weight as the root landed on the floor surface 13 inches below.

Recommended Action

Step stools available through Boise Cascade have been placed on the "Boise Restricted Item" list by Procurement. A request to purchase a step stool will be rejected by Boise and the requestor will need to go through Procurement for placement of the item by submitting a Boise Faxform (to x4747) to them. Procurement will then seek EH&S approval to override the restriction.

Step Stool Safety Guidelines:

Characteristics of a safe step stool:

- ☐ The steps are deep enough to fit the length of your feet.
- ☐ The surface of each step is non-skid.
- ☐ The edge of each step is marked with a contrasting color.
- ☐ The base is wider at than the top to prevent tipping.
- ☐ The legs are sturdy and slip-resistant.

When using a step stool:

- ☐ Make sure it is the correct height.
- □ Place firmly on an even surface, free from clutter.
- Climb facing the steps.
- □ Do not lean forward or stretch.
- Only reach for items that are directly in front of you.
- □ Wear appropriate footwear.

Further Information

Any additional assistance or questions regarding this incident or the lessons learned may be directed to (x5818). For other lessons learned, go to: http://www.lbl.gov/ehs/html/lessons_learned.htm

